Title (en)

Control apparatus, control method and engine control unit

Title (de)

Steuervorrichtung, Steuerverfahren und Maschinensteuerungseinheit

Title (fr)

Appareil de commande, procédé de commande et unité de contrôle du moteur

Publication

EP 1780391 A3 20090722 (EN)

Application

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Priority

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Abstract (en)

[origin: EP1279819A2] A control apparatus, a control method, and an engine control unit are provided for controlling an output of a controlled object which has a relatively large response delay and/or dead time to rapidly and accurately converge to a target value. When the output of the controlled object is chosen to be that of an air/fuel ratio sensor in an internal combustion engine, the output of the air/fuel ratio sensor can be controlled to rapidly and accurately converge to a target value even in an extremely light load operation mode. The control apparatus comprises an ADSM controller for calculating a target air/fuel ratio in accordance with a predicted value of an output deviation based on a DELTA SIGMA modulation algorithm, and a PRISM controller for calculating the target air/fuel ratio in accordance with the predicted value based on a sliding mode control algorithm. The control apparatus selects one of the target air/fuel ratios calculated by the two controllers to control the air/fuel ratio using the selected one. <IMAGE>

IPC 8 full level

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Citation (search report)

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- [A] US 5266907 A 19931130 - DACUS FARRON L [US]
- [A] US 5623432 A 19970422 - DEGRAUWE MARC [CH]

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